



1917



### Second Liberty Loan.

**T**HE exact figures for subscriptions to the Second Liberty Loan, which closed on October 27th, are not available at this writing, but it is known that the loan is a splendid success. The amount called for by the Treasury was \$3,000,000,000, with an offer to accept one-half of an over-subscription and an intimation that \$5,000,000,000 would be a good mark to try for. The latter is a stupendous sum to be raised at one time and the fact that \$3,000,000,000 was the sum definitely called for undoubtedly made some difference with the result, but apparently over \$5,000,000,000 has been raised. This does not include any conversions, and is the largest amount of new money ever raised in one loan by any country.

The apportionment of the Treasury to the twelve reserve districts, based upon banking resources, is given herewith.

	Minimum	Maximum
Boston . . . . .	\$300,000,000	\$500,000,000
New York . . . . .	900,000,000	1,500,000,000
Philadelphia . . . . .	250,000,000	415,000,000
Richmond . . . . .	120,000,000	200,000,000
Atlanta . . . . .	80,000,000	135,000,000
Cleveland . . . . .	300,000,000	500,000,000
Chicago . . . . .	420,000,000	700,000,000
Minneapolis . . . . .	105,000,000	175,000,000
Kansas City . . . . .	120,000,000	200,000,000
St. Louis . . . . .	120,000,000	200,000,000
Dallas . . . . .	75,000,000	125,000,000
San Francisco . . . . .	210,000,000	350,000,000
 \$3,000,000,000		 \$5,000,000,000

Every one of the districts has raised the minimum quota, and probably one-half of them have gone above the maximum. The total for the New York district is believed to be approximately \$1,600,000,000, which should satisfy even the most malign critic that the banking interests of this city are giving whole-hearted support to the government. Railway and other corporations, with financial headquarters in New York, and whose bank accounts here swell the New York allotment, divided their subscriptions more generally this time than in the former loan, and this makes the New York total more remarkable.

## Economic Conditions Governmental Finance United States Securities

NEW YORK, NOVEMBER, 1917.

The full result gives proof which will be accepted the world over as evidence that the American people will support their government with all their resources. All sections of the country and all classes of our people have responded heartily. The number of subscribers is not yet announced, but is known to be enormous, and this is the best part of the success. Groups of wage-earners have responded with something like unanimity. Townships are reported where every farmer subscribed. Our population of foreign descent, including Germans, have given a splendid exhibition of loyalty. In those localities, usually rural, where subscriptions have fallen below expectations, the fact may be fairly attributed to unfamiliarity with bond investments, and failure to see the situation in its true proportions.

The ability to absorb great popular loans grows as they are repeated. The organization becomes more effective in its work of presentation, and the public interest increases. The people who subscribed to the first loan came in, generally, on the second, and became workers for it, and as the bond army grows, a feeling of loyalty and enthusiasm develops among the members, akin to that which inspires the armies in the field.

Credit for the success of this great issue must be largely given to the army of volunteer canvassers, speakers and workers, who put in a month of time arousing interest to the pitch which produced the wonderful results of the last days. The effect of their work was cumulative. The enthusiasm at the end swept everybody along, but the labors of the first weeks were a necessary part of the campaign.

The necessity for general participation becomes more apparent as we go along. The proceeds of the loans are disbursed broadly. They go mainly at first hand to wage-earners employed upon government work, but are passed on quickly to the farmers and all classes. In order to keep the government's purse full, these disbursements must be quickly caught up, either through taxation or loans, and returned to the Treasury for use over again. The more directly it is returned the better, for every dollar of un-

necessary expenditure tends to produce effects that are embarrassing to the government and weakening to the economic situation.

One of the chief gains realized by having the bonds widely distributed is that the subscribers will have a direct inducement to save for their payments and to add to their holdings. When everybody does this, the country will be actually paying the cost of the war as it goes along. It is a great achievement to get \$5,000,000,000 subscribed to the loan; but it will be an even greater achievement to get these subscriptions completely paid up, and the decks cleared for a repetition of the act. About \$2,000,000,000 of this new money will go to take up the Treasury certificates already issued, and by the time the last payments on the loan are made, January 15, the proceeds of the loan will be spent, and Treasury certificates will begin to issue against the next loan.

### **Government Expenditures.**

Now that the second war loan has been subscribed, we have another breathing spell and it is in order to cast a look ahead upon the future demands of the Treasury. Congress has authorized, pursuant to Treasury estimates, the sale of \$10,538,945,460 of obligations of various kinds, in addition to \$7,000,000,000 first authorized in April last, \$2,000,000,000 of which were issued in June. Of the \$538,945,460, \$63,945,460 will be used to refund an outstanding issue and the remainder is to reimburse the Treasury for disbursements against which bonds were originally authorized.

With \$2,000,000,000 raised in the First Liberty loan, if \$4,000,000,000 is accepted in the Second Liberty loan, the further amount of obligations authorized is \$11,475,000,000. These, however, are not all authorized in the form of bonds. Four millions may be issued only in Treasury certificates, and \$2,000,000,000 in war savings certificates. The former are issued for short terms, and are particularly designed to be taken by banks, to bridge over the periods between loan offerings. The war savings certificates are intended to be a popular and convenient form of obligation for sale on small payments. Deducting these issues, there remain \$5,475,000,000 which are to be offered in bonds similar in detail to those of the Second Liberty loan.

All of these offerings, together with the taxes levied, were estimated by the Treasury to somewhat more than cover the prospective requirements of the Government, including its loans to allies, up to July 1st, 1918. It has not been supposed, however, that all of the Treasury certificates or war savings certificates would be outstanding at the same time. They serve temporary purposes, and are convertible into the several issues of bonds. Congress will be in session from early in December, throughout the remain-

der of the fiscal year, and will provide for other bond issues as needed.

The real problem is, how fast will the program adopted by the government require disbursements to be made? Figures have been given in the newspapers ranging from \$14,000,000,000 to \$19,000,000,000, as the amounts required during this fiscal year. It is evidently difficult to make a close estimate upon enormous operations, involving so much work that is out of the ordinary run. On the face of the proposition it looks impossible to expend that amount of money for the purposes in view, within the time stated. The major portion of the expenditures are for fabricated goods, and the total value of all the manufactures of the United States in the year 1914 was \$24,246,000,000, and in 1909, \$20,672,000,000. It is true that prices are now much higher than in those years, but some idea of the volume of business involved in the expenditure of even \$14,000,000,000 can be gained by the comparison. The total expenditures for the first four months of the year has been approximately \$3,000,000,000, and for the month of October, \$1,000,000,000. Presumably, they will increase, particularly for shipbuilding and aeroplanes, but how much can they be advantageously increased?

### **Private Work Must Be Reduced.**

If \$18,000,000,000 or \$20,000,000,000 are to be expended upon government work it is certain that private work must be more drastically curtailed. The available supply of labor is limited, and competition for it increases costs without increasing product. The payment of extraordinary wages will attract labor to the war industries, but if it is drawn from coal mines, railways and farms the situation may be so disorganized that even war work will be impeded. The situation is most effectually handled by having the government exercise priority rights. It is doing this as to materials and equipment, and may have to go farther and exercise a priority right to labor. If conscription for government work is deemed impracticable, the object may be accomplished by restricting the employment of labor in non-essential industries.

The urgent demands of this government have interfered in some instances with work being done for the allies, and this has brought up the question whether it is good policy to curtail work for them, and loans to them, in order to hasten our own preparations. It is certainly true that, being at war, we should not be dependent upon others to fight for us, and the nation would not be content where its own honor and interests are involved to play the part of a mere purveyor of supplies. On the other hand, our allies have trained armies already in the trenches, and supplies for those armies may be even more important at the moment than preparations to put an army of our own in the field later. The disaster which has just occurred to the Italian armies illustrates this.

### Inflation.

There is much discussion, both in this country and England, over the effects of borrowing for the purpose of subscribing to the government loans, critics of the policy alleging that it causes an inflation of credit similar to that resulting from issues of paper money, thus bringing about a higher level of prices and costs, and adding to the cost of the war.

It cannot be denied that borrowing does directly increase the amount of credit in use, but the effect is not quite the same as an increase in the supply of money. An increase in the supply of gold, or of paper money where gold payments are suspended, enlarges bank reserves, tends to ease the money market and encourage borrowing. That effect was seen following the heavy importations of gold into this country in 1915 and 1916. On the other hand the borrowing which is done for the purpose of subscribing to the government loans, instead of increasing reserves, increases deposits, and thereby reduces the percentage of reserve, and tightens the money market.

This, however, is not all that happens. It is perfectly true that if after borrowing to create new purchasing power, and turning that purchasing power over to the government, the public goes on its usual course, attempting to use as much purchasing power on private account as before, there will be a congestion of demands for labor and materials which cannot be met, and which will inevitably force up prices.

It would seem that a considerable degree of such expansion in financing a war is unavoidable. The wants of the government are imperative, they are on an enormous scale, and they cannot be immediately met except by the use of credit. It is impossible for the people to at once adjust their private affairs to the new state of things. Business will tend to go along in its accustomed channels, and the scale of living expenditures cannot forthwith be radically changed. There is so much fear of business stagnation that people argue seriously in favor of expenditures as usual. Gradually, however, the natural remedies make themselves felt. Prices rise, the government establishes priority rights, trade channels are congested, and it becomes apparent that the demands in the market are greater than can be satisfied.

The Federal government is appealing to municipalities to abstain so far as practicable from new public works during the war, for two evident reasons, to wit: that the financing of such works must interfere with the war loans, and that the demand for labor and materials must interfere with the war work. The same reasoning applies to private expenditures. The act of saving withdraws purchasing power, releases labor to the Government, and holds inflation in check.

It will be agreed that it is very undesirable to have the general level upon which business is done lifted higher than it is. Already grave apprehensions are felt about it, looking to the

period of readjustment after the war. The rise of living costs has been an important factor in the rise of all costs, but at this time there is a fair prospect that food prices may be stabilized by the large crop yields of the year. Nevertheless, if the demands on the industries are beyond their capacity the general level of wages and prices will continue to rise until checked by the sheer inability of the public to make purchases, or by effective price regulation. The latter, coupled with arbitrary distribution, may justify itself by restraint upon inflation.

Up to this time there has been but little movement in farm lands, but reports are now current of increasing sales and higher prices. A leading farm journal of the Middle West says that "a boom is on in farm lands." It is natural that farmers, getting high prices for their products and having surplus funds for investment, should want to buy more land. If the movement signified that more people were becoming farmers, and more land was being brought under cultivation, it would be regarded favorably. Unfortunately that is not the case generally. It is another phase of inflation, due to the same impulse which causes industrial managers to bid against each other for labor and materials. An extensive land movement involves the use of credit and ties up liquid capital. If farmers will put their surplus funds into the Government loans the farming industry will be in better condition after the war than if lands are lifted to higher levels and the mortgage indebtedness upon them is increased.

Bankers have an important duty to perform in restricting the use of credit for unnecessary purposes. There is perhaps no other influence which can do so much to hold inflation in check, and they should act with a sense of public responsibility.

### Financial Affairs.

The money market has been stable throughout the past month, notwithstanding the unusual demands upon it. Early in the month a Money Committee was organized in New York, headed by the Governor of the Federal Reserve Bank, and with the Presidents of eight of the larger banks and trust companies as members. A fund of \$200,000,000 was placed at its disposal, the purpose being to meet any unusual demands and see that all legitimate needs were cared for. About one-half of the fund was used. It is probable that the Committee will be continued.

Without much change in rates the tendency has been to greater strength. Time money is 5½ to 6 per cent., commercial paper about the same; call loans 3 to 4 per cent. Country bank borrowings have been light, but balances here have been reduced by constant withdrawals through the Federal reserve banks. Payments by interior banks for the succeeding issues of Treasury certificates have not been equal to these withdrawals, as appears by the losses of the Fed-

eral Reserve Bank of New York through the gold settlement fund. On August 3rd the New York bank had \$255,000,000 to its credit in the gold settlement fund, since then it has transferred \$50,000,000 from its vaults to replenish the fund, and on October 26th it had \$36,496,000 to its credit there. The movement to the country is usual at this season, but may be reversed by payments upon the government loan. The money market is not expected to show much change between now and the first of the year.

The principal items of the Clearing House statement show changes between September 29 and October 27, as follows:

	Sept. 29	Oct. 27
Loans .....	\$3,942,269,000	\$4,376,116,000
Demand deposits .....	3,535,640,000	3,565,576,000
Government deposits .....	240,626,000	459,317,000
Reserves, incl. vault cash..	653,748,000	637,127,000
Excess reserve .....	77,012,000	55,553,000

The movement of state banks and trust companies into the Federal reserve system continues on an important scale, the larger institutions leading. The President of the United States has issued a public letter urging all who are eligible to take the step, lending their aid to complete the financial organization of the country. The consolidated statement for October 26, shows total gold holdings of \$1,503,436,000, and reserve deposits of \$1,264,323,000. Federal reserve notes in circulation now amount to \$847,506,000, against which Federal reserve agents hold \$614,692,000. Total earning assets are \$684,959,000, and paid-up capital \$62,629,000.

A committee of Canadian bankers has been in Washington, asking a relaxation of the embargo upon gold exports. This is the season of crop-moving there, and it has been customary for money to move from New York, as it moves to our own agricultural states. There is every reason why the wants of Canada in this respect should be supplied. The trade balance is in her favor, and we owe the money; moreover, New York, as the chief financial center of the continent is the place where Canadian bankers naturally employ their surplus funds, but of course it is a condition of such employment that they shall be able to withdraw their funds when they have use for them at home. It is understood that satisfactory arrangements have been made.

Branches of the Federal reserve bank of Cleveland have been determined upon at Pittsburgh and Cincinnati. Branches of the San Francisco bank have now been opened at Spokane, Seattle and Portland.

During the past month Germany's seventh war loan has been closed, and a Berlin dispatch reports the subscriptions at 12,430,000,000 marks, or about \$3,100,000,000. The total of seven loans is 72,761,000,000 marks, about \$18,000,000,000.

The British government began on October 2

to issue a new series of war bonds, paying 5 per cent. interest, repayable October 1, 1922, at 102, October 1, 1924, at 103, and October 1, 1927 at 105. It also offers a 4 per cent. bond, exempt from income tax, except super taxes, repayable October 1, 1927 at par. These bonds are convertible into the last issue of war bonds at 95. They are said to be selling very freely.

#### Bond Market.

The second Liberty Loan has absorbed the undivided attention of the banks, bond houses and trade organizations throughout the country during the month of October. In many territories the number of expert bond salesmen available for the work was reduced from twenty-five to fifty per cent, as compared with the first Loan on account of the number who had gone into military service.

During the month bond prices declined about 1½%, the average price of forty selected Wall St. Journal issues on October 27 being 86.73, compared with 88.15 on September 27, 1917, while the decline compared with October 29, 1916, was 8¾%.

No public offerings were made, but it was announced that B. F. Goodrich Rubber Company sold privately an issue of \$15,000,000 6% notes covering a period of two years; in serial form at three months' time with required renewals. This is in effect a consolidation of their outstanding short term indebtedness.

Liberty Loan 3½s remain firm with considerable trading slightly under par.

The municipal market has been firm during the month. Early in October the City of Milwaukee, Wis., offered \$1,090,000 4½% bonds but sold only \$250,000 to a local bank, bids for the balance being rejected. The City of Cincinnati sold \$920,000 4¾% bonds at an average price slightly under 102. The City of Dallas offered \$500,000 4% bonds but rejected all bids.

#### General Business Conditions.

Judged by the consumption of coal and the traffic of the railways, two very good indices, industry and trade are up to the limit of facilities. More coal is being mined than ever before, but not enough to supply the demand; more freight is being handled by the railways than ever before, but they cannot promptly move all that is offered. Business is harassed by many uncertainties and vexations, and war business is interfering with peace business. Government orders are taking up more of the productive capacity than was predicted of them some months ago. General trade is good, and merchants have confidence that it will keep up, because the buying power of the population is enormous. Stocks in first hands are light, and owing to high prices distributors are disposed to avoid heavy stocks.

It goes without saying that the labor situation is acute, for there literally is no limit to

the demand for men. The ship-yards are wanting them by the hundred thousand, and employers in various lines are bidding against each other for them. There is, of course, no prospect of an enlarged supply of labor, except as women are introduced into new occupations, but this is constantly going on. In the matter of industrial relations, developments on the whole are reassuring. The most serious disturbances of recent months have been either formally settled or are in process of adjustment, and in many instances settlement has included agreements which look to the amicable adjustment of any further differences that may arise during the war. The recognized labor leaders have used their influence to compose the difficulties, and to keep work going. It is not to be expected that in abnormal times like these all friction can be avoided, or that no unreasonable action will be taken, but it seems due to say that the leaders and the rank and file have shown a patriotic spirit. There has been recognition among both employers and employees of the public interest in the uninterrupted activity of all the essential industries. As the war goes on we may hope that the spirit of patriotism will grow stronger, and that all will feel in increasing degree the importance of national unity, and of maintaining the industries at their highest efficiency. Some observers are sanguine enough to think that industrial relations will be permanently better because all classes will draw closer together during the war.

Bradstreet's report of building permits granted for the nine months ending with September, 139 cities, shows aggregate values \$583,676,569, against \$766,500,058 in corresponding period 1916. The same authority gives cotton consumption in September, 569,357 running bales, against 529,227 in September, 1916; bituminous coal shipments in August, 72 roads, 703,177 car-loads, against 634,607 car-loads in August, 1916; anthracite coal shipments, nine months, 1917, 57,778,097 tons, against 49,930,416 in same month 1916, and 48,556,940 same period 1915; shipments of Southern pine, August, 1917, 503,832,714 feet, against 452,793,168 in 1916; shipments Western pine, August, 139,128,575 feet, against 103,696,277 feet in that month of last year. With the exception of building operations, all of these figures indicate an expansion of business.

Crops are moving to market slowly, and this is true not only of wheat, which is under price control, but of oats and cotton which have a free market. This fact supports the view that the delay is because of the activity of farmers with fall work. The visible supply of wheat in the United States and Canada on October 20, was 55,890,000 bushels, against 112,270,000 a year ago; of corn, 2,045,000, against 5,382,000

a year ago, and of oats 23,087,000, against 62,719,000 a year ago.

### Food Supplies.

The most vital factor in the economic situation is recognized to be food supplies, and the outlook has been greatly improved by the assurance of an immense corn crop. All of the grains, except wheat, are above the average of the last five years. Sugar beets, potatoes, onions, beans, cabbages, and vegetables generally are above the yields of any previous year. The product of the commercial canneries is larger than ever before, and the amount of family canning and drying is estimated to be several times that of any previous year. The garden movement has been a success, and it has been a very important factor in the solution of the food problem. All of the organizations for promoting the movement should be kept alive for next year, and should plan now for more effective work next year.

The apple crop is 176,620,000 bushels, as compared with 202,245,000 in 1916 and 215,572,000, the five year average. The hay crop is 91,715,000 tons, as compared with 109,786,000 tons in 1916, and 86,587,000, the five year average. The falling off in hay is in part, if not fully, made good by greater supplies of fodder.

So far as grain and vegetables are concerned, this country is well supplied, and should be able to cut down wheat consumption in order to supply its allies who are obliged to look largely to this country and Canada. The Department of Agriculture estimates our production at 659,797,000, and our normal consumption plus seed requirements at 637,082,000. Estimating a 10 per cent. reduction of consumption, it calculates the available surplus at 77,696,000 bushels. The Canadian surplus is estimated at about 200,000,000 bushels. The required imports of the allies and neutrals are estimated at 450,000,000 to 480,000,000 bushels.

Favorable news comes from Argentina, where the wheat harvest is about to begin in the northern states. The total yield of the country is estimated at 6,000,000 tons, or about 220,000,000 bushels, which would be a record production. The maximum domestic requirement for food and seed would leave at least 150,000,000 bushels for export. Australia and India have large stores of wheat from the last crop, and another crop coming on during our winter season, but unfortunately they are so far away that with the present scarcity of ships these supplies are almost unavailable. Argentina is nearer, but it is farther away than the United States, and this country and Canada are the chief reliance.

The very high prices that have ruled for corn during the past summer, and the loss of pasture and hay in sections affected by drought,

have caused great numbers of cattle to be forced to market. They have been bought liberally by the farmers of the middle west, but slaughtering has been at a high rate. Official figures of animals slaughtered under government inspection in the first seven months of this year, show that hogs fell off over 3,000,000 head, and sheep 800,000 head, but cattle increased 1,200,000. These figures do not take account of the fact that the average weight of animals was less than usual. The high prices of all grains for the last year have been adverse to live stock and dairy production. It has paid better to sell corn than to feed it to animals, and in truth when food is scarce it is better economy for human beings to eat the grains than to make meat with them. A certain amount of meats, and particularly of fats, are, however, required, human habits are not readily changed, and in the long run the farmers who stick to meat production are likely to fare better than a shift at a sacrifice to grain farming.

All the packing houses are now operating under supervision by the Food Commissioner, and the effect of regulation here, as with wheat, has been to eliminate forward trading, or speculation. A situation where profits are limited without any protection against losses does not attract traders. The immediate effect is favorable to consumers, but farmers are claiming that if competitive buying of their products is eliminated, minimum prices should be established throughout. The operations of the Food Commissioner are being constantly extended.

The winter wheat acreage for the ensuing season is being increased over the entire country, and if weather conditions are favorable the largest crop of wheat ever grown should be harvested next summer. Mr. Hoover is hoping for a billion bushels. The government guarantees \$2 per bushel to the grower, and in view of the efforts which Great Britain is making to become more nearly self-sustaining, and of the stimulus to production in all neutral countries, it is quite possible that the government may have to take a loss. If it does the money will be well spent.

### The Railways.

The Inter State Commerce Commission has taken action which indicates its own desire to at once reopen the case of the railways in their appeal for higher rates. In its decision rendered on June 27 last the Commission, while granting the petition in part only, held that a conclusive showing had not been made for the full 15 per cent. asked, but that it would permit a further presentation of the case later. At a preliminary hearing last week counsel for the eastern roads asked that a re-hearing upon the merits of the case be fixed sixty days hence, at

which time the roads would present a statement of their earnings and expenditures during the fall months. The Commission, instead of simply granting the request for a re-hearing at that time, suggested through a letter by its Secretary that it, as alleged, earnings were inadequate to meet increased operating expenses a delay of sixty days in beginning the hearing was inadvisable, and asked that the evidence be submitted at once. The hearing was set accordingly, for November 5th.

Although the final action of the Commission will be based upon evidence yet to be submitted, the facts are so well known that its proposal to advance the case is interpreted as favorable to the roads. Unquestionably public sentiment has been growing in their support, and has been helped by the spirit they have shown in consolidating their operating resources to secure the highest possible efficiency.

### Electric Power on the C. M. & St. Paul Railway.

In the September number of this Bulletin we gave a sketch of the development of the steam engine in recent years, showing the gains that have been achieved in efficiency and economy of coal consumption. A few months ago we gave a statement from the superintendent of motive power of the Pennsylvania Railroad Company, showing that within the last five years that company has practically doubled the coal efficiency of its locomotives, at an increase of about 30 per cent. in capital cost. Pursuing the same line of inquiry, to the substitution of hydro-electric power for steam power we give below a statement from Vice-President Goodnow, of the Chicago, Milwaukee & St. Paul Railway Company, upon the results of electrical propulsion over its Rocky Mountain division, in October, November and December, 1916, as compared with steam propulsion in the corresponding months of 1915.

The statement does not go into comparative costs in dollars and cents, which would be a very complicated calculation, but that a conclusion has been reached favorable to electricity, at least under similar conditions, is evident from the fact that the company is now installing electrical equipment on its Cascades division.

The facts given by Mr. Goodnow show that electricity is decidedly superior to steam in operating efficiency, especially in cold weather, and if the use of electric power increases the capacity of a road, enabling more trains to be operated over the same tracks, of course that fact is a very important element in the total cost of supplying transportation. The superintendent of the Rocky Mountain division has expressed the opinion that to have handled the traffic in the winter of 1916 without electricity, double tracking would have been necessary.

In this connection it may be added that an important consideration in the decision of the Pennsylvania Railroad Company to electrify its suburban service between Philadelphia and Paoli was the fact that it could thereby avoid a costly enlargement of its Philadelphia terminal.

An interesting feature of electrical propulsion is the fact that 11.3 per cent. of the power consumed during the months under review was generated by the trains themselves on the down grades, but Mr. Goodnow says that this regeneration is reckoned as of minor importance com-

pared with the ease and safety of handling the trains on grades, and the lessened wear and tear on equipment. Other authorities say that the most valuable feature of this power generation is the "dynamic braking," or the holding of the train at a uniform speed on down grades without the use of air brakes. Longer and heavier trains and greater speed are possible than with the use of air brakes.

The summary of the record of steam and electric operation in the periods under comparison is given below:

**CHICAGO, MILWAUKEE & ST. PAUL RAILWAY CO.**  
*Electrification Department*  
Data on Operation Under Steam in 1915, and Under Electricity in 1916

Rocky Mountain Division	October		November		December		Total	
	Steam	Fleetr.	Steam	Electr.	Steam	Electr.	Steam	Electr.
<b>Passenger</b>								
1 Train or Train Engine Miles.....	39,474	40,169	41,275	40,549	38,628	38,519	119,330	119,237
2 Helper Engine Miles.....	4,738	.....	7,965	.....	12,048	.....	24,752	.....
3 Number Engines.....	11	7	13	7	13	7	18	11
4 Train Miles per Engine.....	3,043	5,732	3,183	3,800	2,970	5,510	9,190	17,040
5 1,000 K.W.H. at Power Co.'s Meters.....	.....	1,217	.....	1109.5	.....	1,152	.....	3478.5
6 K.W.H. per Train Mile.....	.....	30.3	.....	27.4	.....	29.9	.....	29.4
7 Coal, Total Tons.....	3,383	.....	4,150	.....	3,730	.....	11,260	.....
8 Coal, Pounds per Train Mile.....	171	.....	201	.....	193	.....	188	.....
<b>Freight</b>								
9 1,000 Ton Miles.....	98,512	125,522	93,228	130,848	91,122	107,717	282,862	364,007
10 Train Miles.....	60,666	65,400	58,014	63,299	58,257	57,311	176,937	185,010
11 Helper Engine Miles.....	16,605	7,022	20,422	7,544	19,336	5,591	56,363	20,157
12 Number Engines.....	42	15	41	15	44	15	43	15
13 1,000 Ton Miles per Engine.....	2,403	8,370	2,270	8,700	2,070	7,170	6,743	24,260
14 Number Subdivision Trains.....	535	585	523	583	526	543	1,584	1,711
15 Ton Miles per Train Mile.....	1,625	1,920	1,605	2,070	1,563	1,880	1,600	1,960
16 Total Time, Hours.....	6,094	5,022	5,946	5,084	5,785	4,429	17,825	14,535
17 Minutes per 1,000 Ton Miles.....	3.70	2.40	3.83	2.33	3.81	2.47	3.78	2.39
18 1,000 K.W.H. at Power Co.'s Meters.....	.....	4,696	.....	5,119	.....	4,528	.....	14,343
19 K.W.H. per 1,000 Ton Miles.....	.....	37.4	.....	39.1	.....	42.0	.....	39.4
20 Total Tons Coal.....	12,150	.....	13,670	.....	13,230	.....	39,050	.....
21 Pounds Coal per 1,000 Ton Miles.....	247	.....	294	.....	291	.....	276	.....

\*"Subdivision Train"—One train over one Subdivision: Divide by 2 for trains over entire Division.

\*\*"Ton-Miles per Engine-Mile" equals tons per train with one electric engine and short helper service, or with one steam engine and longer helper service. In this connection consider item 17.

Total Regeneration over entire Division, month of November, equals 11.3% of consumption at motors.

Passenger on 2% grade, January 21-27, 1917.—Regeneration = 42.8% of consumption at motors.

Passenger on 1.66% grade, January 21-27, 1917.—Regeneration = 23.1% of consumption at motors.

#### Statement by Vice-President Goodnow.

Chicago, August 31st, 1917.

The NATIONAL CITY BANK,

New York City, N. Y.

Gentlemen:—

Referring to your letter of August 6th, I attach hereto a blueprint which shows you the approximate tons of coal used for October, November and December, 1916; item No. 7 for passenger service and item No. 20 gives the same information for through-freight service. The figures do not include coal used for switching or work trains, which figures I have not conveniently available. Item No. 5 of this table also gives the kilowatt hours used for passenger service, and item No. 18 gives the same information for through-freight service.

I might state, however, in this connection that the question of relative cost of fuel is only one of a good many items which affect the question of relative economies under steam vs. electric operation, as I believe the following will indicate to you:

In the first place, although the figures shown on the blueprint show up favorably for electrical operation, they can by no means be considered as final, inasmuch as the comparative figures for steam operation represent

the results of many years of effort and experience, while the figures for electricity are based on the use of apparatus and a system which is entirely new in many respects, and at the time the figures were prepared, on an operating experience of less than one year. The figures are given for the Rocky Mountain Division only, as they have not been compiled in a similar manner for our Missoula Division.

Harlowton is the eastern terminus of the Rocky Mountain Division, and is the station where electric operation begins. Deer Lodge is the western terminus of this division, while Three Forks, located about midway between the two above named points was formerly a steam engine division point. Under steam operation, train engines were changed at Deer Lodge, Three Forks and Harlowton. Thus, a steam locomotive made about 113 continuous miles. At the end of that run it was put in the roundhouse or shop to have it cleaned, boilers washed, etc., and for any light repairs. This necessitated a large roundhouse and shop force at each of the three above mentioned points. Freight trains were tied up in the yards and there were the usual other costly and vexatious delays. All train and engine crews changed at each of the through subdivision points mentioned, except passenger train crews which ran from Deer Lodge through to Harlowton. Under steam, the

caboosees and many of the engines were assigned which of course made it necessary to take the caboose from the train at each subdivision point.

With the introduction of electricity we were able to double what I may call the cruising radius of our locomotives. As far as the railroad is concerned we have eliminated Three Forks entirely. All locomotives run the entire 226 miles from Deer Lodge through to Harlowton with only a light inspection at Three Forks of bearings and pantographs. The shop and roundhouse are entirely closed down, seven or eight miles of tracks have been removed and the comparatively large roundhouse force previously employed has been replaced by a single electrician. All locomotives and cabooses are pooled, the men being given suitable locker space to store their lanterns, flags, tools, etc. Through freight trains do not leave the main track and often are not switched at all. At Harlowton the engine is given a rough inspection and any light repairs made that are necessary. Detailed inspection and maintenance work is done at Deer Lodge.

The same change in operation as referred to above has been effected on the Missoula Division, Avery to Deer Lodge; in this case Alberton being the steam engine division point eliminated.

The blueprint being sent you also shows for the Rocky Mountain Division a comparison of locomotive performance for October, November and December, under steam operation in 1915, and electric operation in 1916. It should be understood that the figures given, while sufficiently correct for comparative purposes, as they are taken from the same report forms, are not to be considered as strictly accurate when considered individually, the forms being those from which the data could most conveniently be obtained.

Item No. 2 on the blueprint shows that helper engine miles increased under steam as the temperature decreased, this being due to the difficulty of "steaming" the locomotives during extremely cold weather and making it necessary to operate helper engines in connection with passenger trains, over long distances. This helper service for passenger trains, with its extra crew cost, switching delays, etc., has been eliminated under electricity.

By reference to item No. 3 on the print, showing the relative number of engines required for electric vs. steam operation, you will note that less than half as many electric locomotives are required compared with steam engines, for the same service.

Item No. 9 under freight data, "Thousands of Ton Miles" shows an average increase during the months of electric operation of 28.8 per cent over that of steam. For November the increase was 40 per cent. In this connection the superintendent of the division has stated that to handle the 1916 business, either electrification, or with steam,—double tracking, was necessary. The latter would of course, have required extra motive power. Possibly the superintendent did not intend his statement should be taken literally, but in any event it is reasonable to assume that under the business conditions which existed during the period under consideration, and the resulting congestion, the steam figures would be, for steam, too favorable.

Item No. 11 indicates that under freight service and for the same ton miles, there would be over three times as many helper engine miles under steam as under electricity, the cause for this being due largely to the same conditions as applied under passenger service.

Using the figures as they stand, we find from item No. 13, "Thousands of Ton Miles per Engine," that the electric engine handles about  $3\frac{1}{2}$  times as many ton miles per month as the steam engine, and from item No. 17, "Minutes per Thousand Ton Miles," that the electric engine cuts from the time to do a given business 30 per cent, partly by faster running and partly by heavier trains.

Item No. 15, "Ton Miles per Train Mile," is about the same as tons per train, and 22 per cent greater for electricity than steam.

As to the effects of regeneration on the power consumption, it will be noted that for the month of November, the amount of regenerated power measured at the locomotives was 11.3 per cent. of the total power consumed at the motors. I may say, however, that the power saving features of regeneration is not considered so important by us as the increased safety and ease with which trains are handled on the heavy mountain grades and the saving in wear and tear on brake shoes and equipment.

Truly yours,

C. A. GOODNOW, Vice-President.

#### Norfolk and Western Railway.

The Norfolk & Western Railway has been operating for over a year with electric power over 29 miles of heavy grades upon its Pocahontas division, which includes the passage over the Allegheny Mountains. It has a heavy coal movement to handle. The company has made a statement about its experience with electric propulsion, from which we take the following:

"In the development of this business the company has taken advantage of all modern methods in steam traction, in respect to the use of maximum weight trains and the most powerful type of locomotives, and has thus reduced the movements over the division to a minimum. But it was found that track capacity was frequently reached in normal service and that growth of business could be cared for only by very expensive physical reconstruction. Careful study of the possibilities and economy of electric traction for these special conditions resulted in the conclusion that it would be practicable to increase the train speed greatly and that this, together with the elimination of delays occasioned by coaling and watering of steam locomotives, would enable a greatly increased tonnage to be handled at a reduction in operating cost which would return a substantial profit above interest and depreciation charges on the electric equipment, thus postponing the necessity for new trackage and other additions which would not directly reduce operating costs.

"Twelve electric locomotives have been provided for the service, replacing thirty-four Mallet steam locomotives. Each electric locomotive consists of two units weighing 135 tons, giving a total weight of 270 tons for the complete locomotive.

"Electric operation has been in service too short a time to give data as to performance, but it may be said that the estimates of increased capacity to be obtained from this equipment have been fully met and that an unusually heavy tonnage has already been handled without congestion. The movement of the heavy tonnage trains by electricity has been effected with ease and smoothness; the trains accelerate promptly and without shock or jerk on the heavy grades, and it has been found that the full trains can be smoothly controlled by one head engine on the 2.5 per cent. down grade by electric braking alone and at a uniform speed slightly above that of the regular running speed. The acceleration of one of these heavy trains is impressive as regards the amount of power required. Preliminary tests indicate that getting a train in motion up the grade requires as much as 11,000 electrical horse-power and that running at uniform speed up the grade requires 8,000 electrical horse-power to be delivered to the train. It is believed that no such amount of power has ever before been developed on a single train, either steam or electric, in regular service."

#### Superiority of the Electric Locomotive.

Mr. F. H. Shepard, director of heavy traction, Westinghouse Electric and Manufacturing Company, in a recent number of the *Electric Journal* says:

"The recent noteworthy development of the steam locomotive has been accompanied by its greater complication as a machine, so that the cost of maintenance, as well as the necessity for skilled labor in its upkeep, has been in many cases a serious problem which has been conspicuously emphasized during the year. The greater simplicity and ruggedness of construction of the electric locomotive provide a very great freedom from this handicap. It is interesting to note that in any adoption of electric power for railroad service, commencing with each initial operation, there has been a distinct and progressive advantage in reliability of operation, as compared with steam. The electric locomotive of to-day, in its ability to handle the heaviest trains in congested service, to make long sustained runs and to remain continuously in service, has demonstrated its unquestionable superiority over any method of steam operation."

### **Conservation of Coal.**

The conservation of our coal supplies is a subject of national interest. We owe it to succeeding generations not to consume coal unnecessarily. Moreover the fluctuations in consumption are so great that it is impossible to closely adapt the supply to the demand, as witness the shortage of coal at the present time, and the frequent intervals of idleness in the mining districts in the past. Mr. Shepard, in the article referred to, calls attention to the fact that one-fourth of the coal mined is consumed by the railways, and that the movement of this alone forms a very considerable part of the traffic demands on the railways. To the extent that hydro-electric power is substituted this consumption of coal and demand on transportation facilities will disappear. Unfortunately, although there are 40,000,000 to 50,000,000 horse-power of possible but unused water power in the country, most of it is under the jurisdiction of the Federal government, and tied up so tight that practically no new development is being made. The running waters, which will flow forever are closely guarded, in the name of conservation, while the coal supplies are depleted.

But even where coal is used to generate electricity in large stationary units, one pound of coal will produce as much power as two pounds burned under a locomotive boiler.

Prof. Robert M. Anderson, of Stevens Institute of Technology, in the article written for this Bulletin a few months ago, made a surprising statement showing that more than one-half of all the power used in the industries of this country is now electrically applied. Mr. F. H. Sniffin, in the October number of the *Electric Journal*, makes the even more surprising statement that during the years 1917 and 1918 power units will be installed in the United States aggregating in capacity 60 per cent. of the total steam generating capacity operating at the beginning of 1916. He adds:

"While this indicates a tremendous increase in the country's power demand, it involves, also, a very large transformation in the methods of generating power, for many small plants will be shut down, the power being taken from central stations, who themselves have increased their units to several times their former sizes,

effecting thereby a great reduction in the cost of power. It is not at all unlikely that this transformation process will bring the fuel consumption of the country per unit of power consumed to one-half of what it was five years ago, inasmuch as it involves the discontinuance of uneconomical plants, and brings the central station fully into its proper economic function as a central source of supply, enabling it to operate profitably the largest and most modern types of generating apparatus."

### **Gains by Consolidating Power Production.**

Mr. Samuel Insull, head of the Commonwealth Edison Company, Chicago, has been a leader in demonstrating the superior efficiency of large generating units and the gains that may be accomplished by supplying the diversified demands of a community from a central source, instead of by numerous small units. As long ago as 1911, Mr. Insull, in an address to the Commercial Club of Chicago stated that to generate the amount of power the Commonwealth-Edison Company was then distributing, by the methods of ten years before, would require 1,500,000 tons of coal per annum more than it was using.

Mr. Insull says that power for the railways should be supplied by electric generating stations also supplying the industries along their lines, and that a reduction of cost will thus be accomplished for all purposes. The practice of a separate power plant for every manufacturing establishment and for each railway train is uneconomical, and behind the times. The factor of diversity, alone, or, in other words, the fact that all consumers do not make their maximum demands at the same time, is enough to produce great savings in capital investment, and in operating costs by consolidating their demands. Furthermore, by using electric power it is possible in many instances to have the steam generating stations located at the mines, thus relieving the railways of coal traffic. Discussing the application of electricity to the railways, before the war, Mr. Insull said:

"According to the reports of the State Railway and Warehouse Commission, the coal consumption at the present time by the steam railroads of the State of Illinois is 11,620,000 tons. If the transportation business were operated electrically, assuming the coal consumption was three pounds per kilowatt-hour, there would be a saving of 7,500,000 tons of coal, or about 15 per cent. of the total coal production of the State of Illinois.\* I do not know of any greater example of possible conservation of the resources of this great State than the gradual electrification of the steam railroads of the State."

As far back as 1910, the President of the British Institution of Electrical Engineers, proposed a scheme for dividing England into districts for consolidated production and distribution of power and estimated that the plan would accomplish a saving of from 80,000,000 to 100,000,000 tons of coal per annum. It is more than probable that this plan will be taken up in England, under public authority, after the war.

\* Turbines of 30,000 kilowatt capacity are now producing at the rate of 1.5 lbs. of coal to a kilowatt hour, and turbines of 70,000 kilowatt capacity are under construction, from which still better results are expected.

This theory is approved and endorsed by Thomas A. Edison, who has said that it will not be many years before the public will hardly know what coal is. "Its use," he says, "will be segregated in vast power houses, and to the ordinary individual it will become a curiosity; as all users will obtain their light, power and heat from electrical distribution stations."

Mr. Insull, urging the concentration of power production in this country has recently said:

"It is a policy that is worthy of the greatest engineers and worthy of the thought of the greatest financiers in this country. It is a conservation of the truest order. If the same policy is carried out throughout the United States, the conservation of fuel will be something tremendous and the conservation of labor will be something tremendous. The letting loose of capital that can be used in other directions will stimulate business.

"There is no greater problem in the industrial world to-day, no problem that presents greater opportunities for the engineers to achieve distinction, no problem that presents greater opportunities for the financier to achieve distinction and profit, than the proper method of producing energy and distributing it in a given area; and involved in that question is the solution of the providing of money for that portion of the electrification of steam railroads that ends when the energy is put into the track."

#### **Conserving Capital and Labor.**

There are several reasons why this subject is especially pertinent and interesting at this time. One is that the world needs new industrial economies to help make good the loss of capital and labor in the war. There are people who will be alarmed at the idea of having the railways lose the revenue-producing coal traffic, and at the suggestion of a revival of water transportation, just as there are labor leaders who see nothing but injury to the wage-earning class in every new labor-saving method, but there is hope that the experiences of the war will clear away many of these misapprehensions, and enable all to see how the common interest is served by industrial progress. If the war should teach this lesson so effectively that everybody would really comprehend it, the losses during the war would be a bagatelle compared with the gains that would be realized. It is an historic fact that the development of the steam engine enabled England to stand the cost of the wars with Napoleon and speedily enjoy a more widespread prosperity than the country had ever known before, and there is good reason to believe that electricity can do now what steam did then.

The gains by the development of electric power are typical of what may be accomplished in all branches of industry, and would be rapidly accomplished if popular thought could be centered upon the development of industry, rather than upon controversies over the division of the product.

The vital problem is not how to divide up the production of to-day for consumption to-day, but how to use the output of to-day to increase the production of to-morrow. That is the purpose to which all capital accumulations are put, whether

they come from individual savings, accomplished by self-denial, or from profits in business. Everybody has a good word to say for savings, but profits, and especially large profits, are under suspicion. As a rule, however, both savings and profits have a common origin, in good management, and large profits usually represent savings accomplished by improvements and enterprise in industry. The aggregate profits of the Ford Motor Car Company are greater than of any other motor car company, but the profits on each car are less than with other companies, and that is typical of modern business. When savings and profits become capital they are indistinguishable, for they serve the same uses. One method of accumulation may be said to be passive and the other active, or one negative and the other positive. Personal saving by self-denial is to be commended, but something more than the instinct to hoard or the resolution to practice self-denial was required to develop the steam engine and the electric locomotive.

How will the electrification of industry and transportation be most speedily brought about? Is this progress to be accomplished by breaking down the industrial organization of to-day, or by withdrawing the incentives which stimulate individual ambition and effort? Will industrial progress be more rapid under such a state of affairs as exists in Russia, or by turning control in this country over to such organizations as the I. W. W.? A higher degree of organization and co-operation is wanted in our industrial system; a way must be found to offer greater incentives to the wage-earners, to increase their interest in production, but there is danger that arbitrary efforts to direct and regulate industry through political authority will have the effect of stifling individual enterprise and putting a brake upon progress.

#### **Railway Electrification After the War.**

The possibilities of railway electrification are especially interesting at this time, because they suggest a vast field open for construction work in this country and throughout the world, as soon as capital and labor can be had for it. There is naturally a feeling of uncertainty and apprehension as to industrial conditions after the war. The demand for war materials will fall off, the supply of labor on the market will be greatly increased, and it is a question whether all of this labor can be promptly placed in employment. It will be the most stupendous reorganization of industry ever known, and it is going to be a great social problem to accomplish this change without confusion, loss of confidence, and a period of stagnation. It is important that plans be laid on a large scale to take up the slack, and other countries are laying them. In this country, ready at hand, is the task of equipping the railroads, and other industries

where practicable, to operate by electric power. The undertaking would involve an enormous amount of work and of many kinds. Hydro-electric plants would require in construction a great amount of labor, cement, steel, and heavy machinery. The demand for copper would take the place of the war demand for that metal, and keep the copper mines busy. The demand for electrical equipment of all kinds, including locomotives, would be very great, for the enlargement of the facilities for supplying electric power would cause electricity to be more generally adopted for all the industries. The amount of work in sight, if a general scheme of electrification was undertaken, would be sufficient to relieve the business community of its fears as to idleness and poor trade for some years to come, and would thus encourage other enterprises to go ahead.

The danger will be in a pervasive feeling of uncertainty, causing men to wait with their own plans until they can discern the general trend, and waiting of itself slows down business. Large plans for the employment of labor which can be brought definitely forward at the critical time will serve to inspire confidence and support the whole situation.

The strength of the proposal is in the great amount of work of a semi-public character which it is possible to have done, and which would not only tide the country over the period of industrial uncertainty, but serve to put the country's industries upon a more economical basis permanently. Any reduction in the cost of power will strengthen the country's position in the competitive situation after the war. Every saving of this character will lessen the necessity for wage reductions after the war.

#### STATEMENT OF RESOURCES AND LIABILITIES OF EACH OF THE TWELVE FEDERAL RESERVE BANKS AT THE CLOSE OF BUSINESS OCTOBER 26, 1917. (In Thousands of Dollars)

RESOURCES	Boston	N. Y.	Phila.	Clev'd	Rich'd	Atlanta	Chicago	St. Louis	M'pls	Kas.City	Dallas	S.F'r'sco	Total
Gold coin and certificates in vault.....	27,546	281,218	17,623	21,657	6,219	6,175	35,270	4,772	17,878	5,448	12,225	25,082	461,113
Gold Settlement Fund.....	22,047	36,496	38,043	52,338	30,394	3,859	72,842	21,158	5,370	38,460	15,679	27,231	363,967
Gold with foreign agencies.....	3,675	18,112	3,675	4,725	1,837	1,575	7,350	2,100	2,100	2,625	1,838	2,888	52,500
Total gold held by banks.....	53,268	335,826	59,341	78,750	38,450	11,609	115,462	28,030	25,348	46,553	29,742	55,201	877,580
Gold with Federal Reserve Agents.....	35,371	187,224	48,220	47,715	28,729	40,058	81,372	27,075	35,625	30,620	26,303	26,380	614,692
Gold Redemption Fund.....	1,000	5,000	9,0	12	715	540	391	708	303	517	848	30	11,104
Total gold reserves.....	89,639	528,050	108,511	126,477	67,894	52,207	197,225	55,873	61,366	77,690	56,893	81,611	1,503,436
Legal tender notes, Silver, etc.....	4,037	40,276	760	352	157	248	1,816	613	322	45	493	387	49,506
Total Reserves.....	93,676	568,326	109,271	126,829	68,051	52,455	199,041	56,486	61,688	77,735	57,386	81,998	1,552,912
Bills discounted, Members.....	10,573	213,624	10,242	9,598	11,320	11,526	52,173	21,719	9,231	23,764	9,450	13,574	397,024
Bills bought in open mark't.....	24,046	89,564	13,357	18,101	5,731	2,775	7,715	2,428	1,787	1,237	7,847	4,002	177,590
Total bills on hand.....	34,919	302,188	23,599	27,699	17,051	14,301	59,888	24,147	11,018	25,001	17,297	17,576	c 574,684
U. S. Govern'mt long-term securities.....	610	2,426	550	7,947	1,296	893	21,007	2,233	1,860	8,853	3,972	2,519	54,166
U. S. Govern'mt short-term securities.....	2,686	16,074	3,128	3,693	2,364	8,945	4,948	1,793	3,037	2,210	2,252	54,346	55,876
Municipal Warrants.....			10	12	155			10	46				233
Total Earning Assets.....	38,215	320,688	27,237	39,351	20,711	24,294	85,843	28,173	15,925	36,064	23,567	24,811	634,959
Due fr. other F. R. Bks. net.....	3,111	6,497	11,269	2,036	1,114			6,002	2,512	3,695	2,233	6,395	b 6,896
Uncollected Items.....	18,598	55,216	32,885	18,199	17,893	19,266	37,151	19,573	10,017	17,551	15,629	19,3 9	281,677
Total deduction from gross deposits.....	21,709	55,216	39,382	29,468	19,929	20,380	37,151	25,875	12,529	21,246	17,892	25,794	288,573
5% redemption fund against F. R. bank notes.....										400	137		537
All other resources.....					100			345	524		122	63	1,334
<b>TOTAL RESOURCES.....</b>	<b>153,600</b>	<b>944,230</b>	<b>175,940</b>	<b>195,648</b>	<b>108,691</b>	<b>97,229</b>	<b>322,035</b>	<b>111,079</b>	<b>90,666</b>	<b>135,445</b>	<b>99,104</b>	<b>132,696</b>	<b>2,528,365</b>
LIABILITIES													
Capital Paid in.....	5,467	15,236	5,273	6,460	3,477	2,595	8,048	3,305	2,579	3,372	2,783	4,034	62,629
Government Deposits.....	12,833	15,591	5,313	15,157	8,535	5,666	17,545	9,688	5,013	10,746	8,748	14,196	132,221
Due to members—reserve account.....													
Due to nonmember banks clearing ac't.....	74,592	528,035	73,634	98,754	40,799	32,226	156,951	46,537	39,587	67,612	38,854	66,742	1,264,323
Collection Items.....													
Due to other F. R. Bk's net.....	12,243	25,287	32,537	23,693	13,79	12,831	10,895	5,749	7	39	2	3,761	35,335
Total Gross Deposits.....		36,426						19,945	12,900	4,209	10,962	6,105	174,492
F. R. Notes in actual circulation.....		99,658	637,876	110,640	128,010	62,165	49,067	201,762	69,192	48,548	83,322	53,707	1,606,371
F. R. Bank Notes in circulation, net liability.....		47,932	288,798	59,613	60,998	42,896	45,547	112,144	38,582	39,239	34,583	42,614	34,560
All other Liabilities incl. Foreign Govern't credits.....		543	2,320	414	180	153		81			168		3,859
<b>TOTAL LIABILITIES.....</b>	<b>153,600</b>	<b>944,230</b>	<b>175,940</b>	<b>195,648</b>	<b>108,691</b>	<b>97,229</b>	<b>322,035</b>	<b>111,079</b>	<b>90,666</b>	<b>135,445</b>	<b>99,104</b>	<b>132,696</b>	<b>2,528,365</b>

(a) Total Reserve notes in circulation, 847,506.  
 (b) Difference between net amounts due from and net amounts due to other Federal Reserve Banks, 6,895; The Gold Reserve against net deposit Liabilities is 66.5%; Gold and lawful money reserve against net deposit liabilities 70.3%. Gold Reserve against Federal Reserve Notes in actual circulation, 73.8%.  
 (c) Bills discounted and bought; municipal warrants: 1-15 days 344,190; 16-30 days 51,829; 31-60 days 101,536; 61-90 days 75,287; over 90 days 2,015. Total 574,917.

## "City Bank Service."

### Of Interest To Every Investor

THE aim of THE NATIONAL CITY COMPANY is to place in the hands of investors sound securities which will return satisfactory income.

We buy and sell United States Government, foreign government, railroad, municipal, public utility, industrial bonds and short-term notes. We also deal in acceptances.

A complete organization of specialists, who keep in touch with the influences bearing upon the different branches of the investment business, is maintained in each of these departments. Each department devotes its entire time and energy to one particular class of security. The expert knowledge, experience and information offered by such an organization provides a service of the highest quality to the investor.

That the facilities of the Company may be available throughout the Country twenty-three correspondent offices have already been established in large investment centers. We invite inquiries from institutional and individual investors, either in person or by correspondence.

With the many new problems confronting the investor at this time, the services of this organization should be of special value.

*The November list B-61 will be forwarded upon request.*

### The National City Company

National City Bank Building, New York

#### CORRESPONDENT OFFICES

PHILADELPHIA, PA. 1421 Chestnut St.	BOSTON, MASS. 10 State Street	CHICAGO, ILL. 137 So. La Salle St.	SAN FRANCISCO, CAL. 424 California St.
PITTSBURGH, PA. Farmers Bank Bldg.	ALBANY, N. Y. Ten Eyck Bldg.	LONDON, ENG. 36, Bishopsgate, E. C. 2	LOS ANGELES, CAL. Hibernian Bldg.
WILKES-BARRE, PA. Miners Bank Bldg.	BALTIMORE, MD. Munsey Bldg.	CLEVELAND, OHIO Guardian Bldg.	DETROIT, MICH. Dime Bank Bldg.
KANSAS CITY, Mo. Republic Bldg.	BUFFALO, N. Y. Marine Bank Bldg.	ST. LOUIS, MO. Bank of Commerce Bldg.	WASHINGTON, D. C. 741-15th St. N. W.
DENVER, COLO. First Natl. Bank Bldg.	SEATTLE, WASH. Hoge Bldg.	PORTLAND, ORE. Railway Exchange Bldg.	MINNEAPOLIS, MINN. McKnight Bldg.
ATLANTA, GA. Trust Co. of Georgia Bldg.			NEW ORLEANS, LA., 303 Baronne St.

